

N^o 23,054



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Date of Application, 15th Dec., 1892

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PROVISIONAL SPECIFICATION.

Improvements in Medical and other Electric Induction Coils.

JOSEPH WALKER DAVIS The Cedars Tettenhall Road Wolverhampton, Agent, do hereby declare the nature of this invention to be as follows :—

That a rubber pad or cushion be placed on the hammer or hammers of the contact breaker of such coil or upon the end of the magnet facing to the hammer
5 or hammers of the contact breaker, or upon both ; in such a manner, or manners that when an electric current is passed through the coil the contact breaker vibrates in the usual way—the noise produced by the working of the said coil is thereby greatly lessened.

(2) That the contact breakers of medical or other electric induction coils be
10 separately incased from the other part or parts of the coil, in such a manner or manners that certain required portions of the coil be left free in order to facilitate the manipulating of the same.

The casing of the contact breaker to be done as follows.

That the end of the reel or case (near the contact breaker) upon which the wire
15 is wound be made of such a shape as to allow, a case, or portion of a box of (wood, metal, or other substance to suit invention) to be hinged, fastened, fixed or otherwise, in such a manner that the same may be shut down over the contact breaker, or breakers, and come in contact with a rubber washer of the required shape, all round the joint of the same, and be kept in position in such a manner or
20 manners that the case may be easily removed to examine the contact breaker and be replaced.

Incasing the contact breaker in this manner decreases the noise of its vibrations and greatly prevents its transmitting of vibrations to other parts of the coil and its appendages.

25 That the inventor of the above may place rubber cushions or pads in any such positions of the induction coils as may be beneficial to the above invention as is usually done.

That this invention part 1 or 2 may be applied separately or both together at the will of the inventor.

30 Such induction coils are then for all practical purposes silent.

Dated this 13th day of December 1892.

JOSEPH W. DAVIS.

COMPLETE SPECIFICATION.

Improvements in Medical and other Electric Induction Coils.

35 JOSEPH WALKER DAVIS, The Cedars, Tottenhall Road, Wolverhampton, Agent, do hereby declare the nature of my said invention and in what manner the same is to be performed, to be particularly described and ascertained in and by the following statement :—

The object of my invention is to lessen or entirely remove the disagreeable sound
40 and vibration caused by the “contact breaker” in an electric induction coil such as is used for medical, and other purposes, and also to protect the contact breaker and adjacent parts from accidental injury.

To effect the first object, I secure a pad of india rubber, leather or similar material to that surface of the “contact breaker” which makes contact with the

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magnet, or I may secure the pad to the end of the magnet itself or to both thus making the current more constant so that in either case a pad of elastic or semi-elastic material is interposed between the "contact breaker" and the magnet.

To effect the second object, I enclose the "contact breaker" and its connections, in a casing, lid or cover. This casing lid or cover I make by preference circular 5 and of the same size as the end of the "bobbin" of the induction coil to which I attach it by a hinge or other suitable means fastening it when shut by means of a hook and staple or other well known means.

One object of the cover is to prevent injury to the "contact breaker" but with the further object of lessening noise and vibration. 10

I cover the meeting surfaces of the lid or the bobbin or both with india rubber, leather, or some similar substance. Instead of hinging the cover I may make it to slide on or may otherwise attach it, but in whatever manner I attach it I provide a covering of india rubber or similar material as before described. I may make a lid covering the whole of the induction coil and provided with a lining of india 15 rubber or similar material at the meeting surfaces.

I may use any part or the whole of my invention in connection with any induction coil for medical or other purposes.

And in order that this my said invention may be more fully understood I shall now proceed more particularly to describe the same and for that purpose I shall 20 refer to the figures on the sheet of drawings hereunto annexed the same letters of reference indicating corresponding parts throughout the figures.

Fig. 1 is a front view elevation of an electric induction coil for medical purposes constructed according to my invention, shewing the moveable handles in an upright position as for carrying. 25

Fig. 2 is a view in elevation as Fig. 1 from the one end the moveable handle brought down.

a is the receptacle containing and secreting the cells by means of the hinged lid *a*¹ and carrying the moveable handle *b* which is jointed at *c*. *d d* are brackets connected to *a* for supporting the handles *e e* when not in use. *f* is the electric 30 induction coil and *g g* is the "bobbin" or "reel" upon which the wire of the said coil is wound. *h* is the cap or cover, hinged at *i*, *j* is a hook, and *k* the staple.

In Fig. 1, I shew *h*, the cap, cover, or lid closed, and secured by this fastening. In Fig. 2 I shew this cap or cover *h*, open from *g*, exposing the "contact breaker" 35 or "maker" and parts used in the supporting and controlling of same, in this view the india rubber or yielding washer is shewn *l*, to engage upon the surface of *g* (when closed as Fig. 1.) *m* is the "contact breaker" or "maker." *n* is the hammer upon which the pad of india rubber, or other suitable material is arranged upon *m*, or parts in connection therewith and for the purposes above set 40 forth.

Although I have described and shewn *h*, as a hinged cover upon the end of the "reel" or "bobbin" *g*, I may modify the same in various ways to effect the object of my invention for instance I may construct a groove upon the inner surface or end of *g* into which I should fix an india rubber ring, so that when *h* was closed it 45 would bear upon or against it, or I may slide the lid or cover over *g*, and secure the same by the well known bayonet catch, or I may construct a lid to cover the whole of the induction coil, hinged to *a*¹ at the back and fastened at the front, in any case the meeting surfaces will be intervened by india rubber or other suitable material and for the purposes above set forth. 50

Although I have shewn and described my invention as applied to a medical induction coil with battery but my invention can be applied to other coils without batteries, and receptacles for same.

I do not limit myself to the precise details or arrangements of parts as shewn and described as variation may be made according to the construction of electric 55 induction coils and without departing from the principle of my invention.

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Having now particularly described and ascertained the nature of my said invention, and in what manner the same is to be performed, I declare that what I claim is :—

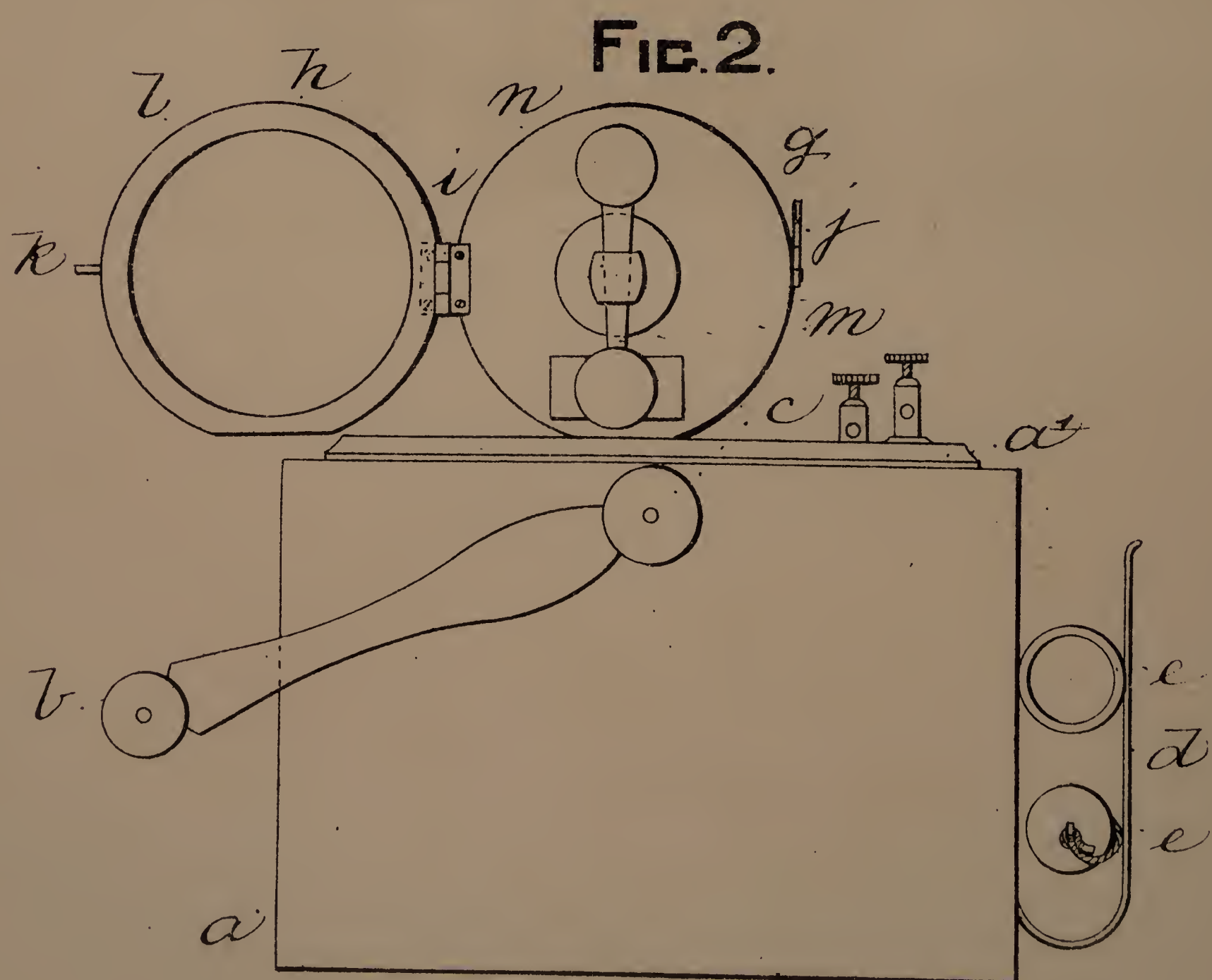
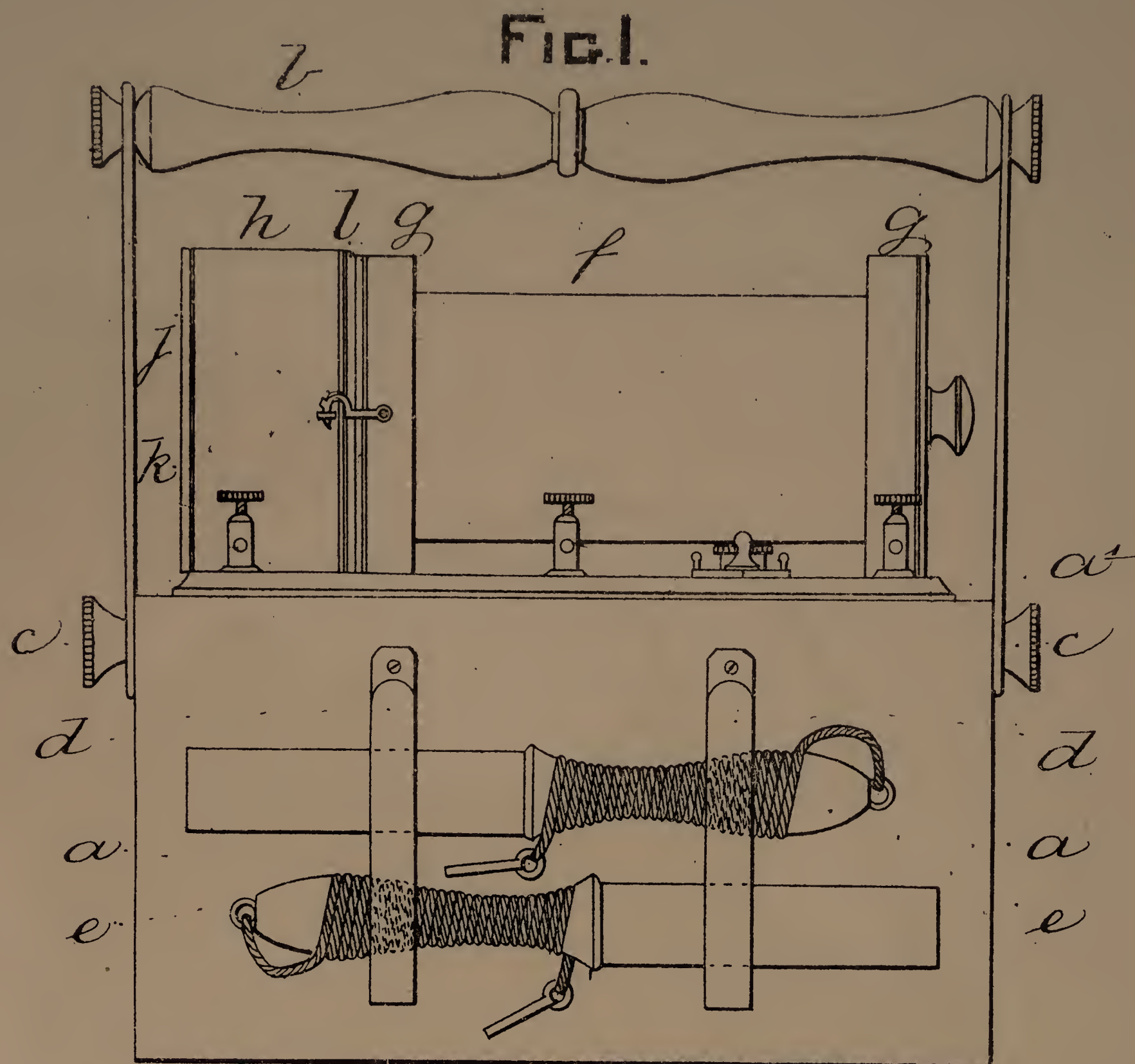
- 5 1. The “Improvements in medical and other electric induction coils.” The combination of a pad of india rubber or other suitable material to the “contact breaker” or “maker,” or parts in connection therewith, substantially as and for the purpose herein before described.
- 10 2. The improvements in medical and other electric induction coils. The combination of a lid or cover for enclosing the “contact breaker” or “maker” and parts in connection therewith, or for the covering of the induction coil, the meeting surfaces being intervened by india rubber or other suitable material, substantially as and for the purpose herein before described.
- 15 3. The combination and arrangement of parts substantially as and for the purpose described in the foregoing Specification and shewn on the accompanying sheet of drawings.

Dated September 12th 1893.

THOS. KENDRICK,
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Agent for Applicant.

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[This Drawing is a reproduction of the Original on a reduced scale.]

